

Supplemental Shear Brace Allowable Load Tables Based on Applied Axial Loads and Concrete Strength

Allowable Design Loads – 18" iSB Stand-Alone Brace on Concrete Foundation⁽¹⁾

Shear Brace	Width (in)	Height (in)	Applied Vertical Load (lbs)	Seismic Design			Wind Design					
				Concrete Strength = 2500psi (min.)			Concrete Strength = 2500 psi (min.)			Concrete Strength = 3000 psi (min.)		
				Allowable Shear ⁽²⁾ (lbs)	Drift ⁽²⁾ (in)	Uplift ⁽³⁾ (lbs)	Allowable Shear ⁽²⁾ (lbs)	Drift ⁽²⁾ (in)	Uplift ⁽³⁾ (lbs)	Allowable Shear ⁽²⁾ (lbs)	Drift ⁽²⁾ (in)	Uplift ⁽³⁾ (lbs)
iSB 18x8	18	93.25	1000	2215	0.37	14185	2435	0.44	15590	2435	0.44	15590
			2000	2215	0.37	14185	2435	0.44	15590	2435	0.44	15590
			4000	2215	0.37	14185	2281 ⁽⁴⁾	0.41	14605	2435	0.44	15590
			6000	2215	0.37	14185	2125 ⁽⁴⁾	0.38	13605	2435	0.44	15590
			8000	2215	0.37	14185	1969 ⁽⁴⁾	0.36	12605	2380	0.43	15235
iSB 18x9	18	105.25	1000	1905	0.43	13770	2090	0.51	15105	2090	0.51	15105
			2000	1905	0.43	13770	2090	0.51	15105	2090	0.51	15105
			4000	1905	0.43	13770	2021	0.49	14605	2090 ⁽⁴⁾	0.51	15105
			6000	1905	0.43	13770	1882	0.46	13605	2090 ⁽⁴⁾	0.51	15105
			8000	1905	0.43	13770	1744	0.43	12605	2090 ⁽⁴⁾	0.51	15105
iSB 18x10	18	117.25	1000	1725	0.48	13890	1895	0.57	15255	1895	0.57	15255
			2000	1725	0.48	13890	1895	0.57	15255	1895	0.57	15255
			4000	1725	0.48	13890	1814 ⁽⁴⁾	0.55	14605	1895	0.57	15255
			6000	1725	0.48	13890	1690 ⁽⁴⁾	0.51	13605	1895	0.57	15255
			8000	1725	0.48	13890	1566 ⁽⁴⁾	0.47	12605	1893	0.57	15240
iSB 18x11	18	129.25	1000	1530	0.53	13580	1685	0.64	14955	1685	0.64	14955
			2000	1530	0.53	13580	1685	0.64	14955	1685	0.64	14955
			4000	1530	0.53	13580	1646 ⁽⁴⁾	0.63	14605	1685	0.64	14955
			6000	1530	0.53	13580	1533 ⁽⁴⁾	0.58	13605	1685	0.64	14955
			8000	1530	0.53	13580	1420 ⁽⁴⁾	0.54	12605	1685	0.64	14955
iSB 18x12	18	141.25	1000	1340	0.59	12995	1475	0.70	14305	1475	0.70	14305
			2000	1340	0.59	12995	1475	0.70	14305	1475	0.70	14305
			4000	1340	0.59	12995	1475	0.70	14305	1475	0.70	14305
			6000	1340	0.59	12995	1403 ⁽⁴⁾	0.67	13605	1475	0.70	14305
			8000	1340	0.59	12995	1300 ⁽⁴⁾	0.62	12605	1475	0.70	14305
iSB 18x13	18	153.25	3010	1200	0.64	14185	1320	0.74	13890	1320	0.74	13890
iSB 18x14	18	168	3010	1030	0.69	14185	1130	0.78	13035	1130	0.78	13035
iSB 18x16	18	192	3010	770	0.77	14185	845	0.86	11140	845	0.86	11140
iSB 18x18	18	216	3010	660	0.87	14185	725	0.97	10755	725	0.97	10755
iSB 18x20	18	240	3010	550	0.97	14185	605	1.08	9970	605	1.08	9970

- (1) See iLevel Shear Brace Specifier's Guide TJ-8620 for general notes and further information.
- (2) Interpolation of **Allowable Shear** and **Drift** values is allowed; use the values for the two closest heights. For braces less than 93¾" tall, use the values for a 93¾" tall brace.
- (3) Do not interpolate **Uplift** values; use the value for the shorter brace.
- (4) If a minimum 3½"x6½"x¼" bearing plate (ASTM 1018, grade 36 steel suitable for concrete contact) is installed beneath each holdown, allowable shear, drift and uplift need not be reduced when higher overhead loads are applied. Use the maximum wind design values shown for each brace size.

Allowable Design Loads – 24" iSB Stand-Alone Brace on Concrete Foundation⁽¹⁾

Shear Brace	Width (in)	Height (in)	Applied Vertical Load (lbs)	Seismic Design			Wind Design					
				Concrete Strength = 2500psi (min.)			Concrete Strength = 2500 psi (min.)			Concrete Strength = 3000 psi (min.)		
				Allowable In-Plane Shear ⁽²⁾ (lbs)	Drift ⁽²⁾ (in)	Uplift ⁽³⁾ (lbs)	Allowable In-Plane Shear ⁽²⁾ (lbs)	Drift ⁽²⁾ (in)	Uplift ⁽³⁾ (lbs)	Allowable In-Plane Shear ⁽²⁾ (lbs)	Drift ⁽²⁾ (in)	Uplift ⁽³⁾ (lbs)
iSB 24x8	24	93.25	1000	4435	0.74	21415	4880	0.88	23565	4880	0.42	23560
			2000	4435	0.74	21415	4880	0.88	23565	4880	0.42	23560
			4000	4435	0.74	21415	4880	0.88	23565	4880	0.42	23560
			6000	4435	0.74	21415	4723 ⁽⁴⁾	0.85	22805	4880	0.42	23560
			8000	4435	0.74	21415	4516 ⁽⁴⁾	0.82	21805	4880	0.42	23560
iSB 24x9	24	105.25	1000	3905	0.88	21280	4295	1.05	23405	4295	0.47	23405
			2000	3905	0.88	21280	4295	1.05	23405	4295	0.47	23405
			4000	3905	0.88	21280	4295	1.05	23405	4295	0.47	23405
			6000	3905	0.88	21280	4184 ⁽⁴⁾	1.02	22805	4295	0.47	23405
			8000	3905	0.88	21280	4001 ⁽⁴⁾	0.98	21805	4295	0.47	23405
iSB 24x10	24	117.25	1000	3325	0.93	20185	3660	1.10	22220	3660	0.53	22220
			4000	3325	0.93	20185	3660	1.10	22220	3660	0.53	22220
			6000	3325	0.93	20185	3660	1.10	22220	3660	0.53	22220
			8000	3325	0.93	20185	3591 ⁽⁴⁾	1.08	21805	3660	0.53	22220
iSB 24x11	24	129.25	1000	3010	1.04	20145	3315	1.26	22220	3315	0.59	22185
			4000	3010	1.04	20145	3315	1.26	22220	3315	0.59	22185
			6000	3010	1.04	20145	3315	1.26	22220	3315	0.59	22185
			8000	3010	1.04	20145	3258 ⁽⁴⁾	1.24	21805	3315	0.59	22185
iSB 24x12	24	141.25	1000	2695	1.19	19710	2965	1.41	21685	2965	0.64	21685
			4000	2695	1.19	19710	2965	1.41	21685	2965	0.64	21685
			6000	2695	1.19	19710	2965	1.41	21685	2965	0.64	21685
			8000	2695	1.19	19710	2965	1.41	21685	2965	0.64	21685
iSB 24x13	24	153.25	4850	2440	0.63	21415	2685	0.70	21310	2685	0.70	21305
iSB 24x14	24	168	4850	2130	0.69	21415	2340	0.77	20360	2340	0.77	20355
iSB 24x16	24	192	4850	1650	0.80	21415	1815	0.89	18045	1815	0.89	18045
iSB 24x18	24	216	4850	1400	0.90	21415	1540	1.00	17225	1540	1.00	17225
iSB 24x20	24	240	4850	1150	1.00	21415	1265	1.11	15720	1265	1.11	15720

- (1) See iLevel Shear Brace Specifier's Guide TJ-8620 for general notes and further information.
- (2) Interpolation of **Allowable Shear** and **Drift** values is allowed; use the values for the two closest heights. For braces less than 93¾" tall, use the values for a 93¾" tall brace.
- (3) Do not interpolate **Uplift** values; use the value for the shorter brace.
- (4) If a minimum 3½"x6½"x¼" bearing plate (ASTM 1018, grade 36 steel suitable for concrete contact) is installed beneath each holdown, allowable shear, drift and uplift need not be reduced when higher vertical loads are applied. Use the maximum wind design values shown for each brace size.

Allowable Design Loads –Double Portal Brace Assembly on Concrete Foundation⁽¹⁾

Shear Brace	Width (in)	Height (in)	Applied Vertical Load (lbs)	Seismic Design			Wind Design					
				Minimum Concrete Strength = 2500psi (min.)			Concrete Strength = 2500 psi (min.)			Concrete Strength = 3000 psi (min.)		
				Allowable In-Plane Shear ⁽²⁾ (lbs)	Drift ⁽²⁾ (in)	Uplift ⁽³⁾ (lbs)	Allowable In-Plane Shear ⁽²⁾ (lbs)	Drift ⁽²⁾ (in)	Uplift ⁽³⁾ (lbs)	Allowable In-Plane Shear ⁽²⁾ (lbs)	Drift ⁽²⁾ (in)	Uplift ⁽³⁾ (lbs)
iSB 18x7	18	78	1000	5600	0.3	13495	6160	0.33	14845	6160	0.33	14845
			2000	5600	0.3	13495	6160	0.33	14845	6160	0.33	14845
			4000	5600	0.3	13495	6060 ⁽⁴⁾	0.32	14605	6160	0.33	14845
			6000	5600	0.3	13495	5645 ⁽⁴⁾	0.30	13605	6160	0.33	14845
			8000	5600	0.3	13495	5230 ⁽⁴⁾	0.28	12605	6160	0.33	14854
iSB 18x7.5	18	85.5	1000	5380	0.34	14215	5910	0.37	15615	5910	0.37	15615
			2000	5380	0.34	14215	5907 ⁽⁴⁾	0.37	15605	5910	0.37	15615
			4000	5380	0.34	14215	5528 ⁽⁴⁾	0.35	14605	5910	0.37	15615
			6000	5380	0.34	14215	5150 ⁽⁴⁾	0.32	13605	5910	0.37	15615
			8000	5380	0.34	14215	4771 ⁽⁴⁾	0.30	12605	576	0.36	15235
iSB 18x8	18	93.25	500	5150	0.37	14840	5665	0.40	16325	5665	0.40	16325
			1000	5150	0.37	14840	5589 ⁽⁴⁾	0.39	16105	5665	0.40	16325
			2000	5150	0.37	14840	5416 ⁽⁴⁾	0.38	15605	5665	0.40	16325
			4000	5150	0.37	14840	5069 ⁽⁴⁾	0.36	14605	5665	0.40	16325
			6000	5150	0.37	14840	4722 ⁽⁴⁾	0.33	13605	5635	0.40	16235
iSB 18x9	18	105.25	8000	5023	0.36	14475	4375 ⁽⁴⁾	0.31	12605	5288	0.37	15235
			1000	3810	0.43	13770	4180	0.51	15105	4180	0.51	15105
			2000	3810	0.43	13770	4180	0.51	15105	4180	0.51	15105
			4000	3810	0.43	13770	4042 ⁽⁴⁾	0.49	14605	4180	0.51	15105
			6000	3810	0.43	13770	3765 ⁽⁴⁾	0.46	13605	4180	0.51	15105
iSB 24x7	24	78	8000	3810	0.43	13770	3488 ⁽⁴⁾	0.43	12605	4180	0.51	15105
			1000	10300	0.29	20800	10400	0.30	21000	10400	0.30	21000
			4000	10300	0.29	20800	10400	0.30	21000	10400	0.30	21000
			6000	10300	0.29	20800	10400	0.30	21000	10400	0.30	21000
iSB 24x8	24	93.25	8000	10300	0.29	20800	10400	0.30	21000	10400	0.30	21000
			1000	8870	0.37	21415	9760	0.42	23560	9760	0.42	23560
			2000	8870	0.37	21415	9760	0.42	23560	9760	0.42	23560
			4000	8870	0.37	21415	9760	0.42	23560	9760	0.42	23560
			6000	8870	0.37	21415	9445 ⁽⁴⁾	0.41	22805	9760	0.42	23560
iSB 24x9	24	105.25	8000	8870	0.37	21415	9031 ⁽⁴⁾	0.39	21805	9760	0.42	23560
			1000	7810	0.42	21280	8590	0.47	23405	8590	0.47	23405
			2000	7810	0.42	21280	8590	0.47	23405	8590	0.47	23405
			4000	7810	0.42	21280	8590	0.47	23405	8590	0.47	23405
			6000	7810	0.42	21280	8369 ⁽⁴⁾	0.46	22805	8590	0.47	23405
8000	7810	0.42	21280	8002 ⁽⁴⁾	0.44	21805	8590	0.47	23405			

- (1) See iLevel Shear Brace Specifier's Guide TJ-8620 for general notes and further information.
- (2) Interpolation of **Allowable Shear** and **Drift** values is allowed; use the values for the two closest heights. For braces less than 93¾" tall, use the values for a 93¾" tall brace.
- (3) Do not interpolate **Uplift** values; use the value for the shorter brace.
- (4) If a minimum 3½"x6½"x¼" bearing plate (ASTM 1018, grade 36 steel suitable for concrete contact) is installed beneath each holdown, allowable shear, drift and uplift need not be reduced when higher vertical loads are applied. Use the maximum wind design values shown for each brace size.

Allowable Design Loads –Single Portal Brace Assembly on Concrete Foundation⁽¹⁾

Shear Brace	Width (in)	Height (in)	Applied Vertical Load (lbs)	Seismic Design			Wind Design					
				Minimum Concrete Strength = 2500psi (min.)			Concrete Strength = 2500 psi (min.)			Concrete Strength = 3000 psi (min.)		
				Allowable In-Plane Shear ⁽²⁾ (lbs)	Drift ⁽²⁾ (in)	Uplift ⁽³⁾ (lbs)	Allowable In-Plane Shear ⁽²⁾ (lbs)	Drift ⁽²⁾ (in)	Uplift ⁽³⁾ (lbs)	Allowable In-Plane Shear ⁽²⁾ (lbs)	Drift ⁽²⁾ (in)	Uplift ⁽³⁾ (lbs)
iSB 18x7	18	78	1000	2800	0.31	13495	3080	0.36	14845	3080	0.36	14845
			2000	2800	0.31	13495	3080	0.36	14845	3080	0.36	14845
			4000	2800	0.31	13495	3030	0.35	14605	3080	0.36	14845
			6000	2800	0.31	13495	2822 ⁽⁴⁾	0.33	13605	3080	0.36	14845
			8000	2800	0.31	13495	2615 ⁽⁴⁾	0.31	12605	3080	0.36	14845
iSB 18x7.5	18	85.5	1000	2625	0.33	13870	2885	0.40	15245	2885	0.40	15245
			2000	2625	0.33	13870	2885	0.40	15245	2885	0.40	15245
			4000	2625	0.33	13870	2764 ⁽⁴⁾	0.38	14605	2885	0.40	15245
			6000	2625	0.33	13870	2575 ⁽⁴⁾	0.36	13605	2885	0.40	15245
			8000	2625	0.33	13870	2386 ⁽⁴⁾	0.33	12605	2884	0.40	15235
iSB 18x8	18	93.25	1000	2450	0.36	14120	2695	0.43	15530	2695	0.43	15530
			2000	2450	0.36	14120	2695	0.43	15530	2695	0.43	15530
			4000	2450	0.36	14120	2534 ⁽⁴⁾	0.40	14605	2695	0.43	15530
			6000	2450	0.36	14120	2361 ⁽⁴⁾	0.38	13605	2695	0.43	15530
			8000	2450	0.36	14120	2187 ⁽⁴⁾	0.35	12605	2644	0.42	15235
iSB 18x9	18	105.25	1000	1905	0.43	13770	2090	0.51	15105	2090	0.51	15105
			2000	1905	0.43	13770	2090	0.51	15105	2090	0.51	15105
			4000	1905	0.43	13770	2021 ⁽⁴⁾	0.49	14605	2090	0.51	15105
			6000	1905	0.43	13770	1882 ⁽⁴⁾	0.46	13605	2090	0.51	15105
			8000	1905	0.43	13770	1744 ⁽⁴⁾	0.43	12605	2090	0.51	15105
iSB 24x7	24	78	1000	5150	0.29	20800	5200	0.15	21000	5200	0.15	21000
			4000	5150	0.29	20800	5200	0.15	21000	5200	0.15	21000
			6000	5150	0.29	20800	5200	0.15	21000	5200	0.15	21000
			8000	5150	0.29	20800	5200	0.15	21000	5200	0.15	21000
iSB 24x8	24	93.25	1000	4435	0.37	21415	4880	0.21	23560	4880	0.21	23560
			2000	4435	0.37	21415	4880	0.21	23560	4880	0.21	23560
			4000	4435	0.37	21415	4880	0.21	23560	4880	0.21	23560
			6000	4435	0.37	21415	4723 ⁽⁴⁾	0.20	22805	4880	0.21	23560
			8000	4435	0.37	21415	4516 ⁽⁴⁾	0.19	21805	4880	0.21	23560
iXB 24x9	24	105.25	1000	3905	0.42	21280	4295	0.24	23405	4295	0.24	23405
			2000	3905	0.42	21280	4295	0.24	23405	4295	0.24	23405
			4000	3905	0.42	21280	4295	0.24	23405	4295	0.24	23405
			6000	3905	0.42	21280	4184 ⁽⁴⁾	0.23	22805	4295	0.24	23405
			8000	3905	0.42	21280	4001 ⁽⁴⁾	0.22	21805	4295	0.24	23405

- (1) See iLevel Shear Brace Specifier's Guide TJ-8620 for general notes and further information.
- (2) Interpolation of **Allowable Shear** and **Drift** values is allowed; use the values for the two closest heights. For braces less than 93¼" tall, use the values for a 93¼" tall brace.
- (3) Do not interpolate **Uplift** values; use the value for the shorter brace.
- (4) If a minimum 3½" x 6½" x ¼" bearing plate (ASTM 1018, grade 36 steel suitable for concrete contact) is installed beneath each holdown, allowable shear, drift and uplift need not be reduced when higher vertical loads are applied. Use the maximum wind design values shown for each brace size.